

IN THE CLAIMS:

Please cancel Claims 2, 4, 8 to 12, 16, 18, 22 to 26, 30, 31, 32, 36 to 40, 44, 45, 46 and 50 to 54 without prejudice.

Claim 1 (Currently Amended) A biologically inactive metal interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate convex surfaces that are generally coaxially located with respect to said axis and which are cylindrical in shape along a substantial length of said device; said upper and lower surfaces having elongate side edges;
- b) said body also having ~~arced~~ concave side surfaces along a substantial length thereof; said side surfaces extending between and near to respective side edges of said upper and lower surfaces; and
- c) said device being formed of a metallic material which is biologically inactive.

Claim 2 (Cancelled)

Claim 3 (Currently Amended) The device according to Claim 1 wherein:

- a) both of said side surfaces ~~have a common radius of~~

~~generation have the same shape.~~

Claim 4 (Cancelled)

Claim 5 (Original) The device according to Claim 1 wherein:

a) said upper and lower surfaces have a helically wound discontinuous thread located thereon.

Claim 6 (Original) The device according to Claim 1 wherein:

a) said thread extends from a rear to near a front of said device.

Claim 7 (Original) The device according to Claim 6 wherein:

a) said thread has a maximum and minimum diameter therealong and said minimum diameter approximately equals said maximum diameter in two forward turns of said thread so as to provide a generally smooth cylindrical surface for anterior bone support.

Claim 8 (Cancelled)

Claim 9 (Cancelled)

Claim 10 (Cancelled)

Claim 11 (Cancelled)

Claim 12 (Cancelled)

Claim 13 (Currently Amended) A biologically inactive metal interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate surfaces that are generally coaxially located with respect to said axis; said upper and lower surfaces having elongate side edges; said upper and lower surfaces each having a thread located thereon;
- b) said thread has a generally uniform thread depth except near a front of said device whereat said thread depth is reduced;
- c) said body also having ~~inwardly arced~~ concave side surfaces; said side surfaces extending between respective side edges of said upper and lower surfaces; and
- d) said device being formed of a metallic material which is biologically inactive.

Claim 14 (Currently Amended) In a threaded interbody device for placement between a pair of adjacent vertebrae having an axis of rotation with upper and lower outer surfaces with threads thereon adapted to operably engage respective vertebrae and a pair of concave ~~cylindrically~~ shaped side surfaces joining respective

outer edges of said lower and upper surfaces; the improvement comprising wherein:

- a) each of said upper and lower surfaces are sectors of a cylinder substantially along the entire length of said device and have a convex circular cross-section in a plane perpendicular to said axis; and
- b) said device is formed of a metallic material which is biologically inactive.

Claim 15 (Currently Amended) A biologically inactive non-metal interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate convex surfaces that are generally coaxially located with respect to said axis and which are cylindrical in shape along a substantial length of said device; said upper and lower surfaces having elongate side edges;
- b) said body also having arced concave side surfaces along a substantial length thereof; said side surfaces extending between respective side edges of said upper and lower surfaces; and
- c) said device is formed from a non-metallic material which is biologically inactive.

Claim 16 (Cancelled)

Claim 17 (Currently Amended) The device according to Claim 15 wherein:

a) both of said side surfaces ~~have a common radius of generation~~ are mirror images of each other and extend along parallel to said axis.

Claim 18 (Cancelled)

Claim 19 (Original) The device according to Claim 15 wherein:

a) said upper and lower surfaces have a helically wound discontinuous thread located thereon.

Claim 20 (Original) The device according to Claim 15 wherein:

a) said thread extends from a rear to near a front of said device.

Claim 21 (Original) The device according to Claim 20 wherein:

a) said thread has a maximum and minimum diameter therealong and said minimum diameter approximately equals said maximum diameter in two forward turns of said thread so as to provide a generally smooth cylindrical surface for anterior bone support.

Claim 22 (Cancelled)

Claim 23 (Cancelled)

Claim 24 (Cancelled)

Claim 25 (Cancelled)

Claim 26 (Cancelled)

Claim 27 (Currently Amended) A biologically inactive non-metal interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate surfaces that are generally coaxially located with respect to said axis; said upper and lower surfaces having elongate side edges; said upper and lower surfaces each having a thread located thereon;
- b) said thread has a generally uniform thread depth except near a front of said device whereat said thread depth is reduced;
- c) said body also having ~~inwardly arced~~ concave side surfaces; said side surfaces extending between and near to respective side edges of said upper and lower surfaces; and
- d) said device is formed of a non-metallic material which is biologically inactive.

Claim 28 (Currently Amended) In a threaded interbody device for

placement between a pair of adjacent vertebrae having an axis of rotation with upper and lower outer surfaces with threads thereon adapted to operably engage respective vertebrae and a pair of concave ~~cylindrically~~ shaped side surfaces joining respective outer edges of said lower and upper surfaces; the improvement comprising wherein:

- a) each of said upper and lower surfaces are sectors of a cylinder substantially along the entire length of said device and have a convex circular cross-section in a plane perpendicular to said axis; and
- b) said device is formed of a non-metallic material which is biologically inactive.

Claim 29 (Currently Amended) A biologically active bone-based interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate convex surfaces that are generally coaxially located with respect to said axis and which are cylindrical in shape along a substantial length of said device; said upper and lower surfaces having elongate side edges;
- b) said body also having arced ~~concave~~ side surfaces along a substantial length thereof; said side surfaces extending between and near to respective side edges of said upper and lower

surfaces; and

c) said device being formed from a bone-based material which is biologically active.

Claim 30 (Cancelled)

Claim 31 (Cancelled)

Claim 32 (Cancelled)

Claim 33 (Original) The device according to Claim 29 wherein:

a) said upper and lower surfaces have a helically wound discontinuous thread located thereon.

Claim 34 (Original) The device according to Claim 29 wherein:

a) said thread extends from a rear to near a front of said device.

Claim 35 (Original) The device according to Claim 34 wherein:

a) said thread has a maximum and minimum diameter therealong and said minimum diameter approximately equals said maximum diameter in two forward turns of said thread so as to provide a generally smooth cylindrical surface for anterior bone support.

Claim 36 (Cancelled)

Claim 37 (Cancelled)

Claim 38 (Cancelled)

Claim 39 (Cancelled)

Claim 40 (Cancelled)

Claim 41 (Currently Amended) A biologically active bone-based interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate surfaces that are generally coaxially located with respect to said axis; said upper and lower surfaces having elongate side edges; said upper and lower surfaces each having a thread located thereon;
- b) said thread has a generally uniform thread depth except near a front of said device whereat said thread depth is reduced;
- c) said body also having ~~inwardly arced~~ concave side surfaces; said side surfaces extending between respective side edges of said upper and lower surfaces; and
- d) said device is formed from a bone-based material which is biologically active.

Claim 42 (Currently Amended) In a threaded interbody device for placement between a pair of adjacent vertebrae having an axis of rotation with upper and lower outer surfaces with threads thereon adapted to operably engage respective vertebrae and a pair of concave ~~cylindrically~~ shaped side surfaces joining respective outer edges of said lower and upper surfaces; the improvement comprising wherein:

- a) each of said upper and lower surfaces are sectors of a cylinder substantially along the entire length of said device and have a convex circular cross-section in a plane perpendicular to said axis; and
- b) said device is formed from a bone-based material which is biologically active.

Claim 43 (Currently Amended) A biologically active non-bone based interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate convex surfaces that are generally coaxially located with respect to said axis and which are cylindrical in shape along a substantial length of said device; said upper and lower surfaces having elongate side edges;
- b) said body also having ~~arced~~ concave side surfaces along a substantial length thereof; said side surfaces extending between

and near to respective side edges of said upper and lower surfaces; and

c) said device being formed from a non-bone based material which is biologically active.

Claim 44 (Cancelled)

Claim 45 (Cancelled)

Claim 46 (Cancelled)

Claim 47 (Original) The device according to Claim 43 wherein:

a) said upper and lower surfaces have a helically wound discontinuous thread located thereon.

Claim 48 (Original) The device according to Claim 43 wherein:

a) said thread extends from a rear to near a front of said device.

Claim 49 (Original) The device according to Claim 48 wherein:

a) said thread has a maximum and minimum diameter therealong and said minimum diameter approximately equals said maximum diameter in two forward turns of said thread so as to provide a generally smooth cylindrical surface for anterior bone support.

Claim 50 (Cancelled)

Claim 51 (Cancelled)

Claim 52 (Cancelled)

Claim 53 (Cancelled)

Claim 54 (Cancelled)

Claim 55 (Currently Amended) A biologically active non-bone based interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate surfaces that are generally coaxially located with respect to said axis; said upper and lower surfaces having elongate side edges; said upper and lower surfaces each having a thread located thereon;
- b) said thread has a generally uniform thread depth except near a front of said device whereat said thread depth is reduced;
- c) said body also having ~~inwardly arced~~ concave side surfaces; said side surfaces extending between respective side edges of said upper and lower surfaces; and
- d) said device is formed from a non-bone based material which is biologically active.

Claim 56 (Currently Amended) In a threaded interbody device for placement between a pair of adjacent vertebrae having an axis of rotation with upper and lower outer surfaces with threads thereon adapted to operably engage respective vertebrae and a pair of concave cylindrically shaped side surfaces joining respective outer edges of said lower and upper surfaces; the improvement comprising wherein:

- a) each of said upper and lower surfaces are sectors of a cylinder substantially along the entire length of said device and have a convex circular cross-section in a plane perpendicular to said axis; and
- b) said device is formed from a non-bone based material which is biologically active.

Claim 57 (Currently Amended) An interbody device for placement between a pair of adjacent vertebrae; said device comprising:

- a) a body having an axis and upper and lower elongate convex surfaces that are generally coaxially located with respect to said axis and which are cylindrical in shape along a substantial length of said device; said upper and lower surfaces having elongate side edges;
- b) said body also having arced concave side surfaces along a substantial length thereof; said side surfaces extending from near respective side edges of said upper and lower surfaces; and

c) said body ~~being continuous~~ extending between said concave side surfaces and between said convex surfaces substantially the entire length thereof.